

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) An image processing apparatus comprising:

a image pickup element which picks up an image and outputs a color image signal;

a controlling section which outputs a signal that selects a color image output or a monochrome image output; and

a converting section which receives an input of the color image signal from the image pickup element, and in the case where the color image output is selected by the signal from the controlling section, outputs the color image signal, and in the case where the monochrome image output is selected, adaptively converts the color image signal into the monochrome image signal on the basis of a characteristic nature of the image so as to output the monochrome image signal.

2. (Original) An image processing apparatus comprising:

a image pickup element which picks up an image and outputs a color image signal and a monochrome image signal;

a controlling section which outputs a signal that selects a color image output or a monochrome image output; and

a converting section which receives an input of the color image signal from the image pickup element, and in the case where the color image output is selected by the signal from the controlling section, outputs the color image signal, and in the case where the monochrome image output is selected, and outputs the monochrome image signal that can be acquired by converting the monochrome image signal and the color image signal on the basis of a characteristic nature of the image.

3. (Original) An image processing apparatus according to claim 2, wherein

the converting section corrects a concentration level of the monochrome image signal by using the color image signal when the monochrome image is output.

4. (Withdrawn) An image processing apparatus comprising:
 - a image pickup element which picks up an original document and outputs a color image signal and a monochrome image signal;
 - a memory section which holds the monochrome image signal and the color image signal at the same time; and
 - a determining section which determines whether the image of the original document is color or monochrome on the basis of the color image signal.

5. (Withdrawn) An image processing apparatus which executes compression by dealing with a color difference signal in a lower resolution comparing with a luminance signal in a luminance/color-difference space concerning a color image signal, wherein

the color image signal is composed of a monochrome image signal and a color signal with a lower resolution than that of the monochrome image signal, the luminance signal is generated from the monochrome image signal or the monochrome image signal and the color signal, and the monochrome image signal and the color signal are input by a monochrome sensor and a color sensor with a lower resolution than that of the monochrome sensor.

6. (Withdrawn) An image processing apparatus which decodes a compressed signal by dealing with a color difference signal in a lower resolution comparing with a luminance signal in a luminance/color-difference space concerning a color image signal and generates a decoded image signal, wherein

the decoded image signal is composed of a monochrome image signal with a high resolution and a color image signal with a low resolution.

7. (Currently amended) An image processing apparatus comprising:

- image pickup means for picking up an image and outputting a color image signal;
- controlling means for outputting a signal that selects a color image output or a monochrome image output; and
- converting means for receiving an input of the color image signal from the image pickup element means, and for, in the case where the color image output is selected by the signal from the controlling means, outputting the color image signal, and in the case where

the monochrome image output is selected, adaptively converting the color image signal into the monochrome image signal on the basis of a characteristic nature of the image so as to output the monochrome image signal.

8. (Currently amended) An image processing apparatus comprising:

image pickup means for picking up an image and outputting a color image signal and a monochrome image signal;

controlling means for outputting a signal that selects a color image output or a monochrome image output; and

converting means for receiving an input of the color image signal from the image pickup means, and for, in the case where the color image output is selected by the signal from the controlling section means, outputting the color image signal, and in the case where the monochrome image output is selected, outputting the monochrome image signal that can be acquired by converting the monochrome image signal and the color image signal on the basis of a characteristic nature of the image.

9. (Withdrawn) An image processing apparatus comprising:

image pickup means for picking up an original document and outputting a color image signal and a monochrome image signal;

memory means for holding the monochrome image signal and the color image signal at the same time; and

determining means for determining whether the image of the original document is color or monochrome on the basis of the color image signal.

10. (Original) An image processing method comprising:

picking up an image and outputting a color image signal by a image pickup element;

outputting a signal that selects a color image output or a monochrome image output from a controlling section; and

receiving an input of the color image signal from the image pickup element, and in the case where the color image output is selected by the signal from the controlling section,

outputting the color image signal, and in the case where the monochrome image output is selected, adaptively converting the color image signal into the monochrome image signal on the basis of a characteristic nature of the image so as to output the monochrome image signal by a converting section.

11. (Original) An image processing method comprising:

picking up an image and outputting a color image signal and a monochrome image signal by a image pickup element;

outputting a signal that selects a color image output or a monochrome image output by a controlling section; and

receiving an input of the color image signal from the image pickup element, and in the case where the color image output is selected by the signal from the controlling section, outputting the color image signal, and in the case where the monochrome image output is selected, outputting the monochrome image signal that can be acquired by converting the monochrome image signal and the color image signal on the basis of a characteristic nature of the image by a converting section.

12. (Original) An image processing method according to claim 11, wherein a concentration level of the monochrome image signal is corrected by using the color image signal when the monochrome image is output, by the converting section.

13. (Withdrawn) An image processing method comprising:

picking up an original document and outputting a color image signal and a monochrome image signal by a image pickup element;

holding the monochrome image signal and the color image signal at the same time by a memory section; and

determining whether the image of the original document is color or monochrome on the basis of the color image signal by a determining section.

14. (Withdrawn) An image processing method which executes compression by dealing with a color difference signal in a lower resolution comparing with a luminance signal in a luminance/color-difference space concerning a color image signal, wherein

the color image signal is composed of a monochrome image signal and a color signal with a lower resolution than that of the monochrome image signal, the luminance signal is generated from the monochrome image signal or the monochrome image signal and the color signal, and the monochrome image signal and the color signal are input by a monochrome sensor and a color sensor with a lower resolution than that of the monochrome sensor.

15. (Withdrawn) An image processing method which decodes a compressed signal by dealing with a color difference signal in a lower resolution comparing with a luminance signal in a luminance/color-difference space concerning a color image signal and generates a decoded image signal, wherein the decoded image signal is composed of a monochrome image signal with a high resolution and a color image signal with a low resolution.

16. (New) The image processing apparatus according to claim 1, further comprising a printer that prints out image data from the group consisting of the color image signal and the monochrome image signal.

17. (New) The image processing apparatus according to claim 2, further comprising a printer that prints out image data from the group consisting of the color image signal and the monochrome image signal.

18. (New) The image processing apparatus according to claim 3, wherein the concentration level is a specific density area of the monochrome image signal.

19. (New) The image processing apparatus according to claim 7, further comprising printing means for printing out image data from the group consisting of the color image signal and the monochrome image signal.

20. (New) The image processing apparatus according to claim 8, further comprising a printing means for printing out image data from the group consisting of the color image signal and the monochrome image signal.

21. (New) The image processing apparatus according to claim 8, wherein the converting means corrects a concentration level of the monochrome signal by using the color image signal when the monochrome image is output.

22. The image processing apparatus according to claim 21, wherein the concentration level is a specific density area of the monochrome image signal.

23. (New) The image processing method according to claim 10, further comprising printing out image data from the group consisting of the color image signal and the monochrome image signal.

24. (New) The image processing method according to claim 11, further comprising printing out image data from the group consisting of the color image signal and the monochrome image signal.

25. (New) The image processing method according to claim 12, wherein the concentration level is a specific density area of the monochrome image signal.